

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A vesicle Vesicle for binding a substance, comprising having an artificial membrane containing having amphiphilic molecules[[,]] and a pore-forming unit contained in the membrane, in order to allow that permits access to the vesicle interior, and characterised in that the vesicle contains, in the vesicle interior, a binding substance for binding the a substance to be bound, and wherein the binding substance is disposed in the vesicle interior and is substantially unable to diffuse through the pore formed by the pore-forming unit.

2. (Currently amended): A vesicle Vesicle according to claim 1, characterised in that wherein the binding substance is equipped to provide able to form an ionic bond, a hydrogen bridge bond and/or a hydrophobic interaction with said substance to be bound.

3. (Currently amended): A vesicle Vesicle according to any one of the preceding claim[[s]] 1 or 2, characterised in that wherein the pore unit contains comprises a protein or fragment thereof, [[a]] said protein being part selected from the group consisting of:
 - a) a transmembrane protein,

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- b) a transmembrane protein comprising having an alpha-helical transmembrane structure,
- c) a transmembrane protein comprising having a β -barrel transmembrane structure,
- d) a transmembrane structure protein structural element of a transmembrane protein, and
- e) a protein having a structure that is structurally homologous to a transmembrane structure protein structural element of any one of the proteins according to a), b), c) and/or d).

4. **(Currently amended):** A vesicle Vesicle according to any one of the preceding claims[.] claim 1 or 2, wherein characterised in that the pore unit has an inside pore diameter having a width of more that is greater than 1 nm.

5. **(Currently amended):** A vesicle Vesicle according to any one of the preceding claims[.] claim 1 or 2, wherein characterised in that the pore unit forms an enantioselective pore.

6. **(Currently amended):** A vesicle Vesicle according to any one of the preceding claims[.] claim 1 or 2, wherein characterised in that the vesicle has said binding substance comprises a positively charged oligomer or polymer in the vesicle interior.

7. **(Currently amended):** A vesicle Vesicle according to claim 6, characterised in that
wherein said binding substance comprises poly-lysine the vesicle contains polylysine in the
vesicle interior.

8. **(Currently amended):** A method of binding a substance Use of a wherein a
substance is contacted with the vesicle of claim 1 or 2 according to any one of the preceding
claims for binding a substance.

9. **(Currently amended):** The method of binding a substance according to claim 8,
wherein Use according to claim 8, wherein the substance to be bound is a nucleic acid.

10. **(Currently amended):** A method Method of binding a nucleic acid, comprising
contacting a which comprises bringing the nucleic acid to be bound into contact with [[a]] the
vesicle according to any one of claim[[s]]1 or 2 [[to 7]].

11. **(Currently amended):** A method Method of releasing a nucleic acid, which
comprises comprising the steps of:
a) binding a nucleic acid in a vesicle by a method according to by contacting the nucleic
acid with the vesicle of claim 1 or 2, and

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b) then releasing the bound nucleic acid from the vesicle by applying a shear stress to the vesicle and/or dissolving the vesicle and/or by adding a salt.